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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,298	05/24/2005	Andreja Vukmirovic	BP/G-32983A/LEK	9220

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NOVARTIS
CORPORATE INTELLECTUAL PROPERTY
ONE HEALTH PLAZA 104/3
EAST HANOVER, NJ 07936-1080

EXAMINER	
GUDIBANDE, SATYANARAYAN R	
ART UNIT	**PAPER NUMBER**
1654	

MAIL DATE	DELIVERY MODE
09/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/521,298	VUKMIROVIC ET AL.	
	Examiner	Art Unit	
	Satyanarayana R. Gudibande	1654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/14/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of species pluronic F68 as the poloxamer polyol, glycerol as the polyhydric alcohol and NaCl as the isotonifying agent in the reply filed on 6/29/07 is acknowledged. The traversal is on the ground(s) that the invention of PCT Rule 13.1 is inappropriate in the instant case. Applicants argue that the instant application, "while a national stage filing of a PCT application, this is a United States patent application for purposes of examination, and is governed by U.S. law and regulations. Therefore, the appropriate standards to apply are those under U.S. laws, regulations and procedures, not those of the PCT Rules". Applicants further argue that "Patent Office has failed to meet the substantive standard for an election requirement under U.S. law, regulation, and procedure. On their face, the claims relate to the same invention, i.e., a stable pharmaceutical composition of erythropoietin (EPO) comprising (a) a therapeutically effective amount of EPO, (b) a pharmaceutically acceptable pH buffering system, (c) a poloxamer polyol, and (d) a polyhydric alcohol. Although the Patent Office asserts that the claims relate 1o patentably distinct species, no effort has been made to support this assertion. Applicants further allege that the office merely states without support that there would be 'an examination and search burden for these patentably distinct inventions due to their mutual exclusive characteristics".

This is not found persuasive because the single inventive concept under PCT Rule 13.1 i.e., "Unity of Invention" applies to application filed under national stage (see MPEP 1850 [R-5]) that sates "Any international application must relate to one invention only or to a group of

inventions so linked as to form a single general inventive concept (PCT Article 3(4)(iii) and 17(3)(a), PCT Rule 3.1, and 37 CFR 1.475). Observance of this requirement is checked by the International Searching Authority and may be relevant in the national (or regional) phase". The independent claim is drawn to a composition comprising EPO and genus of poloxamer polyol, polyhydric alcohol and isotonifying agents. The genus of Poloxamer, also known by the trade name Pluronics, are the nonionic block copolymers composed of a central hydrophobic chain of polyoxypropylene (poly-propylene oxide) flanked by two hydrophilic chains of polyoxyethylene (poly-ethylene oxide). Because the lengths of the polymer blocks can be customized, many different poloxamers exist that have slightly different properties. These polymers are commonly named with the word *Poloxamer* followed by a number to indicate which polymer is being discussed and hence the different poloxamer polymers have distinct chemical structure and search for one species may not result in the discovery of others in non-patent literature. The genus of polyhydric alcohols encompasses simple 1,2-ethylenediol to complex sugars, oligosaccharides and polycarbohydrates of unimaginable complexity and each molecule is chemically distinct from the other and search for one species may not result in the discovery of others in non-patent literature. The genus of isotonifying agents comprises of common inorganic salts which are chemically distinct compounds, search for one species may not result in the discovery of others in non-patent literature. Therefore, a species election is required to perform the examination of the application without an undue burden on the examiner to avoid search for all classes of polyhydric alcohols wherein the claims as recited and the disclosure as presented provide no support in the form a proper definition for these generic terms such as polyhydric alcohol, etc.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-20 are pending.

Claims 1-20 are examined on the merit.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/87329 of Papadimitriou.

In the instant application, applicants claim a stable pharmaceutical composition of erythropoietin (EPO), wherein the composition comprises:

a. a therapeutically effective amount of EPO

b. a pharmaceutically acceptable pH buffering system,

c. a poloxamer polyol, and

d. a polyhydric alcohol.

Papadimitriou teaches an aqueous pharmaceutical composition of erythropoietin (EPO) in a pharmaceutically acceptable buffer with a pH range 5.5-7 (claims 1 and 2 of the cited reference) comprising 10-10000 μg/ml of EPO (page 22, lines 4-6) 3% of mannitol (polyhydric alcohol), up to 0.1% of pluronic F68 (poloxamer polyol) (page 22, line 10), 10-100 mM of NaCl

(page 22, line15) and 10-50 mM phosphate buffer (claims 12 of the cited reference), 10 mM methionine (other pharmaceutical excipient) thereby meets the limitations of claims 1, 3-15 and 17-20. The reference also discloses the polyhydric alcohol glycerol (claim 17 of the cited reference) there by meeting the limitation of claim 16 of the instant invention. The additives such as pluronic F68, mannitol or glycerol, NaCl, phosphate buffer and methionine are all can be chemically synthesized and hence the composition of Papadimitriou are not derived from human and/or animal origin and hence meets the limitation of claim 2. Since the composition of Papadimitriou comprises of all the ingredients of the instant invention, and it is inherent that the composition of Papadimitriou also result in a stable pharmaceutical composition.

Therefore, the cited reference of Papadimitriou anticipates the instant invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites a limitation, "wherein the composition is free of additives derived from human and/or animal origin". It is unclear from the claim as recited and the specification as disclosed the nature of these "additives". Therefore, the claim as recited is indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. **10/521296**. Although, the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of the instant application is drawn to a stable pharmaceutical composition of erythropoietin (EPO), wherein the composition comprises:

a. a therapeutically effective amount of EPO

b. a pharmaceutically acceptable pH buffering system,

c. a poloxamer polyol, and

d. a polyhydric alcohol,

and the claims of the copending application is drawn to a stable pharmaceutical composition of erythropoietin (EPO), which consists essentially of:

a. a therapeutically effective amount of EPO

b. a pharmaceutically acceptable pH buffering system, and

c. polyvinylpyrrolidone (PVP) and optionally a poloxamer as an additional stabilizer,

d. an isotonifying agent and/or

e. one or more pharmaceutically acceptable excipient(s) selected from the group consisting of polyols, hydroxypropylcellulose, methylcellulose, macrogol esters and ethers, glycol and glycerol esters, and amino acids.

The difference between the two inventions is the species polyvinylpyrrolidone of Poloxamer. The claims 2 and 4-10 of the instant application and claims 2-9 of the co-pending application are similar. Therefore, the claims 1-10 of the instant application claims 1-9 of the copending application overlap in scope and they are obvious variants of each other and hence, the invention of the instant application is not distinct from the invention of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims 1-9 of the copending application **10/521296** have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satyanarayana R. Gudibande whose telephone number is 571-272-8146. The examiner can normally be reached on M-F 8-4.30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Satyanarayana R. Gudibande, Ph.D.
Art Unit 1654

9/17/07
ANISH GUPTA
PRIMARY EXAMINER